CLAIM AMENDMENTS:

1- 23 cancelled

24. (currently amended) A steering angle sensor for measuring a steering angle of a steering wheel mounted to a steering column, the steering column having an axis of rotation, the sensor comprising:

a main rotor, said main rotor coupled to the steering column or to the steering wheel for synchronous rotation therewith about the steering column axis of rotation, said main rotor being disposed, structured and dimensioned to surround the steering column;
~~a least~~at least one additional rotor disposed for rotation about the steering column axis of rotation, said additional rotor being disposed, structured and dimensioned to surround the steering column;
a first scanning unit for scanning a rotational angular position of said main rotor;
a second scanning unit for scanning a rotational angular position of said additional rotor; and
at least one gear member cooperating between said main rotor and said additional rotor, said gear member being driven by said main rotor and driving said additional rotor, wherein an axis of rotation of said main rotor and an axis of rotation said additional rotor are mutually offset.

25. (previously presented) The steering angle sensor of claim 24, further comprising an evaluation unit for determining the rotational angular position of said main rotor and the rotational angular position of said additional rotor.

26. (previously presented) The steering angle sensor of claim 24, wherein an axis of rotation of said main rotor is coaxial to the axis of rotation of the steering column.

27. (previously presented) The steering angle sensor of claim 24, wherein an axis of rotation of said additional rotor is coaxial to the axis of rotation of the steering column.

28. (previously presented) The steering angle sensor of claim 24, wherein an axis of rotation of said main rotor and an axis of rotation of said additional rotor are coaxial with respect to each other.

29. cancelled

30. (previously presented) The steering angle sensor of claim 24, wherein said main rotor and said additional rotor are disposed substantially parallel to each other.

31. (previously presented) The steering angle sensor of claim 24, wherein said gear member comprises a drive section to be driven by said main rotor and a driven section for driving said additional rotor.

32. (previously presented) The steering angle sensor of claim 24, wherein a transmission ratio of a gear chain comprising said main rotor, said gear member, and said additional rotor is not equal to 1.

33. (previously presented) The steering angle sensor of claim 24, wherein a transmission ratio of a gear chain comprising said main rotor, said gear member, and said additional rotor has a numerical value which is a positive real number but not a positive integer.

34. (previously presented) The steering angle sensor of claim 25, wherein said main rotor and said additional rotor each comprise magnet sections extending over an angular region and having sectors of different polarities, wherein said first and said second scanning units each comprise a magnetic field sensor configuration having output signals supplied to said evaluation unit to determine an absolute steering wheel angle.

35. (previously presented) The steering angle sensor of claim 34, wherein said sectors of said magnet section occupy a same angle.

36. (previously presented) The steering angle sensor of claim 34, wherein said main rotor and/or said additional rotor comprise at least two magnet sections.

37. (previously presented) The steering angle sensor of claim 34, wherein said main rotor comprises at least 5 or 15 magnet sections and said additional rotor comprises at least 4 or 12 magnet sections.

38. (previously presented) The steering angle sensor of claim 34, wherein said magnet sections are uniformly distributed about a circle.

39. (previously presented) The steering angle sensor of claim 34, wherein said magnetic field sensor configuration comprises at least one analog magnetic field sensor.

40. (previously presented) The steering angle sensor of claim 34, wherein said magnetic field sensor configuration comprises two magnetic field sensors which are mutually offset.

41. (previously presented) The steering angle sensor of claim 34, wherein said magnetic field sensors are mutually offset by half an angular region occupied by one said sector.

42. (previously presented) The steering angle sensor of claim 34, wherein said magnet sections are disposed about an outer periphery of said main rotor and/or said additional rotor and said magnetic field sensor configurations are radially offset from said magnet sections.

43. (previously presented) The steering angle sensor of claim 34, wherein said magnet sections are disposed about a circle which is concentric relative to an axis of rotation of said main rotor and/or an axis of rotation of said additional rotor, said magnetic field sensor configurations being axially offset from said magnet sections.

44. (currently amended) A method for determining an absolute steering wheel angle of a steering wheel cooperating with a steering column using the steering angle sensor of claim 24, the method comprising the steps of:

detecting, using a first scanning unit, a rotational angular position of a main rotor, the main rotor being coupled to a steering column or a steering wheel for synchronous rotation therewith, the main rotor disposed for rotation about an axis of rotation of the steering column;
detecting, using a second scanning unit, a rotational angular position of an additional rotor, the additional rotor disposed for rotation about the axis of rotation of the steering column, the additional rotor being driven by a gear member which, in turn, is driven by the main rotor; and

determining the absolute steering wheel angle using output signals of the first and the second scanning units.

45. (previously presented) The method of claim 44, wherein the absolute steering wheel angle is within an interval of 0° to 360°.

46. (previously presented) The method of claim 44, wherein the absolute steering wheel angle is a multiple of an interval between 0° and 360°.